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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,315	FAGANS, JOSHUA	
	Examiner	Art Unit	
	Stephen Alvesteffer	2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-71* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This Office Action is responsive to the Request for Continued Examination filed March 23, 2009. Claims 1-3, 7-9, 11-15, 19-21, 23-29, 31-39, 41, 43, 44, 47, 48, 50, 51, 53-56, 58-61, 63-68, and 70 are amended. Claims 1, 13, 26, 35, 43, 54, and 64 are independent. Claims 1-71 remain pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 9-16, 18, 21-26, 29-35, 40-45, 49-54, 57-64, and 69-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al. (hereinafter Yamamoto), United States Patent 5,862,252.

Regarding claim 1, Yamamoto teaches a method for displaying a representation of at least one image in an application program in a computer having a graphical user interface, comprising:

storing at least a first image preview data set and a second image preview data set for each at least one image, wherein the first image preview data set is of a different resolution than the second image preview data set (see Yamamoto column 6 lines 29-

39; "*a storing means for storing a plurality of types of shape data with different resolutions for displaying an object*");

using the stored first image preview data set to display the at least one image in the graphical user interface (see Yamamoto column 6 lines 29-39; "*a deciding means for deciding the resolution of shape data used for the 3-D image display in accordance with a display condition when displaying the object, which is to be displayed, in the form of the 3-D image, and a displaying means for providing 3-D image display by employing the shape data with the decided resolution*"); and

moving the at least one displayed image using the graphical user interface, and while moving the at least one displayed image, using at least the stored second image preview data set to display the at least one displayed image in the graphical user interface (see Yamamoto column 27 lines 55-67; "*In step S3650, it is determined whether the rotation or movement is being begun, and if it is being begun, then the resolution immediately before the start is saved before the resolution of an image is decreased by 1 step*").

Regarding claim 2, Yamamoto teaches that the resolution of the first image preview data set is higher than the resolution of the second image preview data set (see column 27 lines 55-67; "*In step S3650, it is determined whether the rotation or movement is being begun, and if it is being begun, then the resolution immediately before the start is saved before the resolution of an image is decreased by 1 step*").

Regarding claim 3, Yamamoto teaches that the resolution of the first image preview data set is determined in accordance with a magnification of the displayed at

least one image (see column 29 lines 1-5; "*according to the embodiment described above, the size of a polygon, i.e., resolution, is changed in accordance with a partial shape of the object to be displayed, thereby preventing generating more polygons than necessary in an attempt to faithfully representing the shape*", the display size of the image is the same as the magnification of the image).

Regarding claim 4, Yamamoto teaches that moving the at least one displayed image comprises moving the at least one displayed image smoothly and continuously (see column 27 lines 55-67; "*If the rotation or movement is continuing (J.noteq.0), then the program directly goes to step S3653 to decrease the current resolution by 1*").

Regarding claim 6, Yamamoto teaches that the at least one displayed image is moved by a user interfacing with the graphical user interface (see column 27 lines 55-67; "*In step S3650, it is determined whether the rotation or movement is being begun, and if it is being begun, then the resolution immediately before the start is saved before the resolution of an image is decreased by 1 step*").

Regarding claim 9, Yamamoto teaches prior to storing the image preview data sets, processing the at least one image to form the image preview data sets for each at least one image (see column 6 lines 29-39; "*a storing means for storing a plurality of types of shape data with different resolutions for displaying an object*").

Regarding claim 10, Yamamoto teaches that processing occurs when the at least one image is associated with the application program (see column 12 line 61 through column 13 line 13; "*The following describes the configuration of image processing system 120. CPU A 101 executes data processing, arithmetic operation, and*

data receiving by processing programs stored beforehand in memory A 102. Memory B 103 saves data to be processed. The window system 104 is the display system, which displays processes and results of processing").

Regarding claim 11, Yamamoto teaches that the stored image preview data sets are transferred to the application program (see column 12 line 61 through column 13 line 13; "*The following describes the configuration of image processing system 120. CPU A 101 executes data processing, arithmetic operation, and data receiving by processing programs stored beforehand in memory A 102. Memory B 103 saves data to be processed. The window system 104 is the display system, which displays processes and results of processing*").

Regarding claim 12, Yamamoto teaches that at least one of the first and second image preview data sets for each at least one image comprises a full resolution version of the image (see column 27 lines 35-44; "*First, the hierarchical adaptive polygon data is read from the memory 3302 of FIG. 33 (step S3610). Then, resolution I is set to an initial resolution (step S3620), and the adaptive polygon data of resolution I is displayed in a 3-D manner (step S3630). The initial resolution at this time is the maximum resolution (N-1)*").

Claims 13-16, 18, 21-23, and 25 recite a method having significantly the same limitations as the method of claims 1-4, 6, and 9-12, respectively. The only difference between the claims is that claims 13-16, 18, 21-23, and 25 recite more than two sets of images. However, Yamamoto teaches storing more than two sets of images having different resolutions (see column 6 lines 29-39; "*a storing means for storing a plurality of*

types of shape data with different resolutions for displaying an object"). Therefore, the claims are rejected under the same grounds.

Regarding claim 24, Yamamoto teaches that the queried image preview data sets for each of the plurality of images depends on a speed at which the plurality of images are moved (see column 27 lines 55-67; "*In step S3650, it is determined whether the rotation or movement is being begun, and if it is being begun, then the resolution immediately before the start is saved before the resolution of an image is decreased by 1 step*").

Regarding claim 26, Yamamoto teaches a method for displaying a representation of at least one image in an application program in a computer having a graphical user interface, comprising:

storing at least three or more image preview data sets for each at least one image, wherein the image preview data sets for each at least one image are all of differing resolutions (see column 6 lines 29-39; "*a storing means for storing a plurality of types of shape data with different resolutions for displaying an object*");

selecting one of a plurality of magnification levels for the at least one image (see column 29 lines 1-5; "*according to the embodiment described above, the size of a polygon, i.e., resolution, is changed in accordance with a partial shape of the object to be displayed, thereby preventing generating more polygons than necessary in an attempt to faithfully representing the shape*", the display size of the image is the same as the magnification of the image); and

querying one of the image preview data sets in accordance with the selected magnification level to display the at least one image in the graphical user interface (see column 29 lines 1-5; "*according to the embodiment described above, the size of a polygon, i.e., resolution, is changed in accordance with a partial shape of the object to be displayed, thereby preventing generating more polygons than necessary in an attempt to faithfully representing the shape*", the resolution of the images changes as the size of each displayed shape changes).

Claims 29-31 and 34 recite a method having substantially the same limitations as the method of claims 21-23 and 25, respectively. Therefore, the claims are rejected under the same rationale.

Regarding claim 32, Yamamoto teaches that a number of the plurality of magnification levels equals a number of the plurality of image preview data sets for each at least one image (see column 29 lines 1-5; "*according to the embodiment described above, the size of a polygon, i.e., resolution, is changed in accordance with a partial shape of the object to be displayed, thereby preventing generating more polygons than necessary in an attempt to faithfully representing the shape*", there can be as many different resolution images as there can be the number of sizes to display a polygon).

Regarding claim 33, Yamamoto teaches that a number of the plurality of magnification levels is greater than a number of the plurality of image preview data sets for each at least one image (see column 29 lines 1-5; "*according to the embodiment described above, the size of a polygon, i.e., resolution, is changed in accordance with a*

partial shape of the object to be displayed, thereby preventing generating more polygons than necessary in an attempt to faithfully representing the shape", the number of different sizes a polygon can be displayed is greater than or equal to the number of different resolutions for the stored shapes).

Claims 35 and 40-42 recite a method having substantially the same limitations as the method of claims 13 and 25. Therefore, the claims are rejected under the same rationale.

Claims 43-45 and 49-53 recite a computer-readable medium having substantially the same limitations as the method of claims 1, 2, 4, and 9-12. Therefore, the claims are rejected under the same rationale.

Claims 54 and 57-63 recite a computer-readable medium having substantially the same limitations as the method of claims 26, 29-34, and 40. Therefore, the claims are rejected under the same rationale.

Claims 64 and 69-71 recite a computer-readable medium having substantially the same limitations as the method of claims 35 and 40-42. Therefore, the claims are rejected under the same rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5, 17, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (5,862,252) *supra*, and Iwamura et al. (hereinafter Iwamura), United States Patent 5,602,564.

Regarding claim 5, Yamamoto teaches every limitation of claim 5 except that moving the at least one displayed image comprises scrolling. Iwamura teaches a three-dimensional display application that comprises scrolling (see Iwamura column 4 lines 17-26; "*Scroll, enlargement/scale-down and rotation of the three-dimensional data can be made by making access to the scroll bars, enlargement/scale-down selectors and rods added to the three-dimensional window, without the need of a direct access function to the data having a complicated three-dimensional shape and displayed inside the three-dimensional window*"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide scrolling as taught by Iwamura in the three-dimensional display application of Yamamoto to aid in the movement and rotation of the displayed objects.

Claim 17 recites a method having significantly the same limitations as the method of claim 5. The only difference between claim 17 and claim 5 is that claim 17 recites more than two sets of images. However, Yamamoto teaches storing more than two sets of images having different resolutions (see column 6 lines 29-39; "*a storing means for storing a plurality of types of shape data with different resolutions for displaying an object*"). Therefore, claim 17 is rejected under the same grounds.

Claim 46 recites a computer-readable medium having substantially the same limitations as the method of claim 5. Therefore, claim 46 is rejected under the same rationale.

Claims 7, 8, 19, 20, 27, 28, 36-39, 47, 48, 55, 56, and 65-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (5,862,252) *supra*, and Anderson, United States Patent 6,215,523.

Regarding claim 7, Yamamoto teaches every limitation of claim 7 except that at least one of the first or second image preview data sets for each at least one image is in a memory mapped format. Anderson teaches scrolling of memory mapped images (see Anderson column 14 lines 26-32; "*a memory map of the DRAM is shown illustrating the reallocation of the input buffers as speculation buffers in accordance with the present invention. The DRAM 346 is shown as including (N) speculation buffers 850, which are used by a background process to speculatively decompress image data corresponding to images the user may potentially scroll to*"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to store the images of Yamamoto in a memory mapped format as taught by Anderson as a design choice for the efficient storage and processing of the images.

Regarding claim 8, Yamamoto/Anderson teaches that at least one of the first or second image preview data sets for each at least one image is uncompressed (see Anderson column 7 lines 52-60; "*The thumbnail image 606 is a small, uncompressed low-resolution version of the image*").

Claims 19 and 20 recite a method having significantly the same limitations as the method of claims 7 and 8, respectively. The only difference between the claims is that claims 19 and 20 recite more than two sets of images. However, Yamamoto teaches storing more than two sets of images having different resolutions (see column 6 lines 29-39; "*a storing means for storing a plurality of types of shape data with different resolutions for displaying an object*"). Therefore, the claims are rejected under the same grounds.

Claims 27 and 28 recite a method having substantially the same limitations as the method of claims 19 and 20, respectively. Therefore, the claims are rejected under the same rationale.

Claims 36-39 recite a method having substantially the same limitations as the method of claims 19 and 20. Therefore, the claims are rejected under the same rationale.

Claims 47 and 48 recite a computer-readable medium having substantially the same limitations as the method of claims 7 and 8, respectively. Therefore the claims are rejected under the same rationale.

Claims 55 and 56 recite a computer-readable medium having substantially the same limitations as the method of claims 27 and 28. Therefore, the claims are rejected under the same rationale.

Claims 65-68 recite a computer-readable medium having substantially the same limitations as the method of claims 36-39. Therefore, the claims are rejected under the same rationale.

Response to Arguments

Applicant asserts that Yamamoto is silent as to storing multiple resolutions of image previews as recited in amended independent claim 1 because in Yamamoto the image is generated at display time from stored shape data using a "Delaunay triangulation". The examiner respectfully disagrees.

As recited, the claims of the instant specification read on Yamamoto's disclosure. Applicant cites instant Specification paragraphs 15-18 as showing the recited "image previews" as being fundamentally different from Yamamoto's "shape data with different resolutions". Instant Specification paragraphs 15-18 define an "image preview" as "*a single smaller graphical representation of the master image*". Yamamoto describes the procedure for creating the "shape data with different resolutions" in column 25 lines 54-67, "*the read radial range image data (this is referred to as original uniform polygon data) is regarded as the one with a maximum resolution, then the data is smoothed out and resampled to create a radial range image with a lower resolution*". These definitions are fundamentally the same. Applicants' disclosure uses the lower resolution images as previews to the user to increase display performance while the images are moving. Yamamoto's invention uses lower resolution images to construct 3-D models with increased display performance while the images are moving. The only difference between the recited claims and Yamamoto's disclosure lies in the intended use of the invention – Applicants' use being for previewing images, while Yamamoto's use being

for displaying 3-D models. Intended use does not patentably distinguish recited claims from prior art.

With respect to the argument that Yamamoto's invention only generates, but does not store the lower resolution images, Applicant is directed to Yamamoto column 6 lines 29-39; "*there is provided a 3-D image processing method comprising a* ***storing step for storing a plurality of types of shape data with different resolutions for displaying an object,*** *which is to be displayed, in the form of a 3-D image, a deciding step for deciding the resolution of shape data used for the 3-D image display in accordance with a display condition when displaying the object, which is to be displayed, in the form of the 3-D image, and a displaying step for providing 3-D image display by employing the shape data with the decided resolution*" (emphasis added). Yamamoto's invention generates the lower resolution images first, then stores them, then uses the stored low resolution images to increase performance of the 3-D model as the user manipulates it or otherwise causes it to move on the display.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Miller et al. (US 6,147,703) Electronic camera with image review
- Balabanovic et al. (US 6,976,229) Method and apparatus for storytelling with digital photographs

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Alvesteffer whose telephone number is (571)270-1295. The examiner can normally be reached on Monday-Friday 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on (571)272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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